|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **UNIVERSITY OF NIŠ** | | | | | | |
| **Course Unit Descriptor** | | **Faculty** | | |  | |
| **GENERAL INFORMATION** | | | | | | |
| Study program | | | | **Medicine** | | |
| Study Module (if applicable) | | | |  | | |
| Course title | | | | **Research principles and ethics** | | |
| Level of study | | | | ☐Bachelor ☐ Master’s ☐ Doctoral  **☐ Academic integrated study** | | |
| Type of course | | | | **☐ Obligatory** ☐ Elective | | |
| Semester | | | | **☐ Autumn ☐Spring** | | |
| Year of study | | | | 5th | | |
| Number of ECTS allocated | | | | 3 | | |
| Name of lecturer/lecturers | | | | Professor Dusica Pavlovic, MD. PhD, Professor Gordana Kocić MD. PhD, Professor Ivana Stojanovic, MD. PhD, Professor Tatjana Cvetkovic MD. PhD, Professor Tatjana Jevtovic-Stoimenov MD. PhD, Professor Dusan Sokolovic, MD. PhD, Ass Professor Jelena Basic, MD. PhD, Assistant Andrej Veljkovic, MD. PhD Assistant Milena Despotovic, MD. Assistant Branka Djordjevic, MD. | | |
| Teaching mode | | | | ☐**Lectures**  ☐Group tutorials ☐ Individual tutorials  ☐**Laboratory work** ☐ Project work ☐ Seminar  ☐Distance learning ☐ Blended learning ☐ Other | | |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** | | | | | | |
| During the course, students will learn about:   * basic principles of medical ethics and assessment of ethical attitudes towards specific medical problems; * introduction of students to the methodology of research work in biomedical sciences; * knowledge of the principles of ethics in preclinical and clinical research; * adopt moral and professional standards, and principles of ethical and professional behavior;   acquisition of experience in the presentation of achieved research results in original research papers to scientific/academic community. | | | | | | |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** | | | | | | |
| Introduction to the research methodology in biomedical sciences. Classification and division of science. Issues of ethics in biomedical publications: intellectual (dis)honesty, errors in science: gray zone, cheating, role of Ethics Committees, significance of ombudsmans, ethical principles of using and keeping of lab animals.  Informatics as a science; significance of primary, secondary, and tertiary publications. Use of scientific information in the planning and preparation of scientific research. E-medicine – use and significance in science. Biological assays *in vivo*: experiments with whole organs; with tissue homogenates; with subcellular organelles. Experimental models in hepatology. Experimental models in nephrology. Experimental research of the CNS.  Techniques used to obtain tissue homogenates and subcellular particles (native nuclei, mitochondria, microsomal fractions, cytosol) using the methods of differential ultracentrifuging. Experimental models *in vitro* – tissue culture.  Significance of histochemical, physiological, biochemical, pathophysiological research in medicine.  Human genome project. Laboratory investigation of hereditary diseases. PCR technique and its clinical application.  Clinical research and research in primary health care. Controlled clinical research and medical field-research.  Processing of scientific results: analysis and synthesis of obtained results using statistical processing.  Presentation of obtained results to the public. Original research paper and review research paper. | | | | | | |
| **LANGUAGE OF INSTRUCTION** | | | | | | |
| **☐Serbian (complete course) ☐ English (complete course)**  ☐ Other \_\_\_\_\_\_\_\_\_\_\_\_\_ (complete course)  ☐Serbian with English mentoring ☐Serbian with other mentoring \_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | | | |
| **ASSESSMENT METHODS AND CRITERIA** | | | | | | |
| **Pre exam duties** | **Points 6** | | **Final exam** | | | **points** |
| **Activity during lectures** | **10** | | **Written examination** | | | **60** |
| **Practical teaching** |  | | **Oral examination** | | |  |
| **Teaching colloquia** | **30** | | **OVERALL SUM** | | | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** | | | | | | |